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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,506

05/05/2006

Stefan Schuerg

R.306615

8993

2119 7590 09/03/2008  
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EXAMINER

BASTIANELLI, JOHN

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

09/03/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,506	<b>Applicant(s)</b> SCHUERG ET AL.	
	<b>Examiner</b> John Bastianelli	<b>Art Unit</b> 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 11-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/6/08</u> .  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 11-15, 18-21, 23-25, 29 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Rodriguez DE 10134526 as evidenced by Ganser US 6,499,669. Rodriguez discloses a valve having a valve seat 29 embodied in a valve housing 2, a valve member 21 movable in the valve housing and having a sealing face that when the valve is closed rests sealingly against the valve seat and when the valve is open, together with the valve seat, defines a valve gap through which fuel flows, an encompassing hollow throat formed on the valve member and disposed in the flow direction immediately downstream of the sealing face, and an encompassing cross-sectional thickening 48 of the valve member adjoining the hollow throat. An encompassing edge between the hollow throat and the cross-sectional thickening, at which edge the outer circumferential surface portions of the hollow throat and of the cross-sectional thickening adjoin one another and meet at an angle. The circumferential surface portions of the valve member meet at the edge at a reflex angle. The outer circumferential surface portion adjoining the edge is oriented essentially parallel to a center axis of the valve member. The radius of curvature of the hollow throat is seen to be .2mm. The hollow throat and the sealing face merge smoothly with

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one another. The outer circumferential of the valve member being ground down is product by process. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product in the prior art, the claim is unpatentable even though the prior product was made by a different process (see MPEP 2113). Ganser discloses evidence of grounding down. The valve is in a fuel injection pump.

3. Claims 11-13, 16, 23-24, and 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Boecking US 2003/0057298 as evidenced by Ganser US 6,499,669.

Boecking discloses a valve having a valve seat 11 embodied in a valve housing 1, a valve member 7 movable in the valve housing and having a sealing face that when the valve is closed rests sealingly against the valve seat and when the valve is open, together with the valve seat, defines a valve gap through which fuel flows, an encompassing hollow throat 25 formed on the valve member and disposed in the flow direction immediately downstream of the sealing face, and an encompassing cross-sectional thickening 30 of the valve member adjoining the hollow throat. An encompassing edge between the hollow throat and the cross-sectional thickening, at which edge the outer circumferential surface portions of the hollow throat and of the cross-sectional thickening adjoin one another and meet at an angle. The circumferential surface portion adjoining the edge on the side of the hollow throat is seen to be inclined at an angle of 20-60 degrees. The circumferential surface portions of the valve member meet at the edge at a reflex angle. The hollow throat and the sealing face merge smoothly with one another. The outer circumferential of the valve

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member being ground down is product by process. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product in the prior art, the claim is unpatentable even though the prior product was made by a different process (see MPEP 2113). Ganser discloses evidence of grounding down. The valve is in a fuel injection pump.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13, 16-22, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodriguez DE 10134526 in view of Nothdurft et al. DE 19940296. Rodriguez lacks the circumferential surface portions meet the edge at a reflex angle (if viewed as other than 0 or 90 degrees). Nothdurft discloses a circumferential surface portion that meets the edge at a reflex angle other than 0 or 90 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the circumferential surface portion of Rodriguez meet the edge at a reflex angle as disclosed by Nothdurft in order to have flow move across the valve more smoothly rather than at abrupt changes.

6. Claims 18-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodriguez DE 10134526.

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Rodriguez is silent as to the radius of curvature of the hollow throat being exactly .2mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the radius of curvature of the hollow throat being exactly .2mm as a matter of design choice in order to make it small.

7. Claims 14-15, 17, 21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boecking US 2003/0057298 in view of Rodriguez DE 10134526. Boecking lacks the outer circumferential surface portion adjoining the edge is oriented essentially parallel to a center axis of the valve member. Rodriguez discloses the outer circumferential surface portion adjoining the edge is oriented essentially parallel to a center axis of the valve member. It would have been obvious to make the outer circumferential surface portion of Boecking adjoining the edge oriented essentially parallel to a center axis of the valve member as disclosed by Rodriguez in order to make the surface longer rather than at a point in order to have the valve more streamlined without abrupt changes. Rodriguez is silent as to the radius of curvature of the hollow throat being exactly .2mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the radius of curvature of the hollow throat being exactly .2mm as a matter of design choice in order to make it small.

8. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boecking US 2003/0057298.

Rodriguez is silent as to the radius of curvature of the hollow throat being exactly .2mm. It would have been obvious to one having ordinary skill in the art at the time the

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invention was made to make the radius of curvature of the hollow throat being exactly .2mm as a matter of design choice in order to make it small.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Eblen, Mock, Haeberer, Hennesy, and Spils disclose valve members with hollow throats and cross sectional thickenings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Bastianelli whose telephone number is (571) 272-4921. The examiner can normally be reached on M-Th (8-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Bastianelli  
Primary Examiner  
Art Unit 3753

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Primary Examiner, Art Unit 3753